Data Distribution and Filtering

Presented to:

AMG-9

25 January 1996

Data Schlepping Team

Richard Henderson	SAIC	JMASS
Larry Mellon	SAIC	STOW
Steve Seidensticker	SAIC	DMSO
Bill Stevens	Metron	NSS
Dan Van Hook	Lincoln Lab	RTI
Richard Weatherly	Mitre	RTI

Team Goals

- ## Immediate

  - **Determine RTI Filtering Requirements Needed to Support HLA Prototyping**

  - **Support Protofederation/Experiments**

- ## Long Term

  - **Establish Data Distribution/Filtering Requirements for Baseline HLA Definition**

  - **Determine, Via Experimentation, the Best Way to Meet Such Requirements**

Deliberation Process

- **Email exchanges, teleconferences, meetings starting early December**
- **Initial recommendations (tentative) presented to AMG-8**
- **Key "Summit" meeting 5 January**
  - **Included representation from Time Management WG & DMSO mgmt (Dahmann)**
  - **Settled on near-term requirement**
  - **Agreed to long-term requirement/approach offered by STOW and NSS**
  - **Then it snowed**
- **Subsequent reaction has reopened discussion on long-term issues**

Filtering Levels

What	When	Where
Static Class/Attribute Type	Prototype	RTI
Single Object/Single Attribute Value	Baseline	Fed/RTI
Single Object/Multiple Attribute Values	Baseline	Fed/RTI
Multiple Objects/Single Attribute Value	Baseline	Fed/RTI
Multiple Objects/Multiple Attribute Values	Up to Fed	Fed

COMBINED FEDERATE/RTI FILTERING

- **Large scale simulations need filtering mechanisms that are more powerful than simple attribute value checking in the RTI**

- **Knowledge available only at the federate level is needed by the RTI to make efficient use of communications resources (e.g. multicasting)**

- **Three concepts offered:**
  - **Naval Simulation System Pre-Computation Approach**
  - **STOW Category-Based Approach**
  - **Lincoln Labs Filter Space Approach**

Recommendations

- **AMG Adopt the Static Class/Attribute Filtering as HLA Prototyping Filter Capability**
  - **Will Support Planned Protofeds/Experiments**
  - **Will be Included in 0.3 Version of the RTI**
  - **Can be turned off without processing penalty if not needed**
- **Modify Next Version of IF Spec (due 15 March) to Reflect Filter Capability**
- **Continue Development of More Powerful Filtering Capability for use in Specifying HLA Baseline Definition**

4/8/9

Next Steps

- **Filter Tiger Team will continue to examine concepts. If possible, it will synthesize them into a common approach. If that is not possible, it will recommend one for further development and refinement.**

- **DMSO/STOW will sponsor experiments with the filtering scheme(s) to evaluate for use in establishing HLA Baseline**